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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,715

09/12/2003

Shyue-Ming Jang

JANG3005/EM

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BACON & THOMAS, PLLC

625 SLATERS LANE

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ALEXANDRIA, VA 22314-1176

EXAMINER

MARTINEZ, BRITTANY M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

01/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/660,715	Applicant(s) JANG ET AL.	
	Examiner BRITTANY M. MARTINEZ	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-22 is/are pending in the application.
- 4a) Of the above claim(s) 13-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on September 15, 2008, has been entered.

Status of Application

Applicants' arguments/remarks and amendments filed on September 15, 2008, have been carefully considered. **Claims 1-9 and 13-22** are pending in this application, with **Claim 1** amended, **Claims 10-12** canceled, and **Claims 13-22** withdrawn from further consideration pursuant to CFR 1.12(b) as being drawn to a nonelected invention. **Claims 1-9** have been examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. **Claim 1** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

4. **Claim 1** recites the limitation "the vapor channel" in 9th line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in the prior Office action.

1. **Claims 1-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Trueet (US 5,444,247) in view of Hecker (US 2,743,169) and Coleman (US 2003/0033976 A1).

2. With regard to **Claim 1**, Trueet discloses a vertical sublimation apparatus, comprising: a sublimation channel body (Trueet, Figure 4, 2); a heating evaporation device surrounding an evaporation pipe to control heating temperatures according to different materials for evaporating said materials (Trueet, Figure 4, 3); a condensation device surrounding the upper part of said sublimation channel body (Trueet, Figure 4, 3); and an incubating device for maintaining the temperatures of both the vapor channel and end products (Trueet, Figure 4, 3 and 6).

3. With regard to **Claim 3**, Trueet teaches an incubating device comprising a vapor channel incubating device and a product incubating device, said vapor channel incubating device surrounding an outlet port of said vapor channel (Trueet, Figure 4, 3).

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4. With regard to **Claim 4**, Trueet teaches a product incubating device surrounding the lower part of the sublimation channel body (Trueet, Figure 4, 6).

5. With regard to **Claim 8**, Trueet teaches that the sublimer device can be made from quartz (Trueet, "Detailed Description" 14).

6. Trueet does not explicitly disclose a material rack comprised of a plurality of rails and fixed rings (**Claims 1 and 2**); or said heating evaporation device, said condensation device, and said incubating device being individually configured (**Claim 1**).

7. With regard to **Claims 1-2**, Hecker discloses a sublimation apparatus with an elongated heating container or boat for holding the charge to be sublimed (Hecker, 2, 22-24; Figure 1, 9); baffles (Hecker, 1, 38-39); and a condensation device surrounding the upper part of the sublimation channel body (Hecker, 1, 37-39; Figure 1, 11).

8. Thus, it would have been obvious to one of ordinary skill in the art to modify the apparatus taught by Trueet with the material rack taught by Hecker in order to obtain an apparatus suitable for producing highly pure products.

9. With regard to **Claim 1**, Coleman discloses a sublimation apparatus, wherein the heating evaporation device, condensation device, and incubating device are individually configured (Coleman, "Figure 1;" p. 2, 0022; p. 3, 0025). Thus, it would have been obvious to one of ordinary skill in the art to try to modify the apparatus of the aforementioned applied art with the individual configuration taught by Coleman because one of ordinary skill in the art could have pursued the known potential configuration options for maximizing process efficiency and control within his or her technical grasp with a reasonable expectation of success.

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10. **Claims 5-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Trueet (US 5,444,247) in view of Hecker (US 2,743,169) and Coleman (US 2003/0033976 A1) as applied to **Claim 1** above, and further in view of Hogan (US 20020100710).

11. The aforementioned applied art does not explicitly disclose a product scratching device comprising a central support, fixed rings, and a sawtooth (**Claims 1 and 5-6**) or a product storage tank (**Claim 7**).

12. With regard to **Claims 5-7**, Hecker discloses a product scratching device with a central axis, fixed rings, and a moon-shaped hoe member (Hecker, 2, 25-30; Figure 1, 21, 22, and 27); and a product storage tank at the lower part of the sublimation channel body for collecting the condensed products falling therein after being scratched off by the scratching device (Hecker, Figure 1, 41).

13. With regard to **Claims 5-6**, Hogan discloses a plunger with an outer surface having sawteeth used to assist in removing solid buildup from a chamber (Hogan, 0021; Figure 9).

14. Thus, it would have been obvious to one of ordinary skill in the art to modify the apparatus taught by the prior art with the product scratching device and product storage tank taught by Hogan in order to obtain an apparatus suitable for producing highly pure products.

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15. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Trueet (US 5,444,247) in view of Hecker (US 2,743,169) and Coleman (US 2003/0033976 A1) as applied to **Claim 1** above, and further in view of Sandhu et al. (US 5,377,429).

16. The aforementioned applied art does not explicitly disclose sealing caps locked by O-rings (**Claim 9**).

17. With regard to **Claim 9**, Sandhu discloses a vertical sublimation apparatus with sealing caps located at each end of said channels having heat shield devices placed therein and locked by O-rings to prevent vacuum leakage (Sandhu, Figure 2, 46 and 48).

18. Thus, it would have been obvious to one of ordinary skill in the art to modify the apparatus taught by the prior art with the sealing caps taught by Sandhu in order to obtain an apparatus suitable for producing highly pure products.

Response to Amendments

Applicants' amendments filed September 15, 2008, with respect to the Claims have been fully considered and are accepted.

Response to Arguments

5. Applicants' arguments filed September 15, 2008, with respect to **Claims 1-9** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

1. No claim is allowed.
2. In general, prior art renders the claimed invention obvious.
3. Applicant is required to provide pinpoint citation to the specification (i.e. page and paragraph number) to support any amendments to the claims in all subsequent communication with the examiner. **No new matter will be allowed.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRITTANY M. MARTINEZ whose telephone number is (571) 270-3586. The examiner can normally be reached Monday-Friday 9:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached at (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wayne Langel/
Primary Examiner, Art Unit 1793

BMM

/Brittany M Martinez/
Examiner, Art Unit 1793